Application No. 10/568,777

Amendment dated June 1, 2007

Docket No.: 13156-00037-US

Reply to Office Action of February 1, 2007

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

- (Original) A process for the preparation of water-soluble or water-swellable homopolymers or copolymers by homopolymerization or copolymerization of free-radically polymerizable water-soluble and/or water-dispersible monomers, optionally with further comonomers and optionally at least one crosslinker, in an inverse emulsion polymerization in the presence of at least one redox initiator pair comprising an oxidizing agent and a reducing agent, wherein the reducing agent is 2-hydroxy-2-sulfinatoacetic acid and/or salt thereof.
- (Original) A process as claimed in claim 1, wherein free-radically polymerizable carboxylic acids, or salts or derivatives thereof are used as monomers.
- (Previously Presented) A process as claimed in claim 1, wherein a mixture of acrylic acid and/or salt thereof and acrylamide is used as monomers.
- (Previously Presented) A process as claimed in claim 1, comprising the following steps:
- a) dissolution of at least one water-in-oil emulsifier or at least one protective colloid in a hydrophobic liquid inert for the polymerization as a result of which an oil phase is formed,
- dissolution or dispersion of the monomers and optionally further comonomers, an oil-in-water emulsifier and the at least one redox initiator in water, as result of which an aqueous phase is formed.
- mixing of the oil phase and the aqueous phase until the aqueous phase is emulsified in the oil phase,
- d) homopolymerization or copolymerization of the monomers used and optionally further components.

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5. (Previously Presented) A process as claimed in claim 1, wherein no transition

metal compounds are added in the process.

6. (Previously Presented) A homopolymer or copolymer preparable by a process of

claim 1.

7. (Currently Amended) A homopolymer or copolymer as claimed in claim 6, which

has a residual monomer content of at most 5% by weight, preferably at most 1% by weight,

particularly preferably of at most 0.1% by weight, based on the total mass of the homopolymer

or copolymer.

8. (Previously Presented) A water-in-oil emulsion comprising an oil phase which

comprises at least one water-in-oil emulsifier or at least one protective colloid in an inert

hydrophobic liquid, and an aqueous phase emulsified in the oil phase which comprises at least

one homopolymer or copolymer as claimed in claim 6.

9. (Currently Amended) A water-in-oil emulsion as claimed in claim 8, which has a

speck content of at most 0.5%, preferably at most 0.01%, based on the total mass of the W/O

emulsion.

10. (Previously Presented) A solid composition comprising at least one water-in-oil

emulsifier or at least one protective colloid, at least one oil-in-water emulsifier and at least one

homopolymer or copolymer as claimed in claim 6.

11-13. (Cancelled).

14. (Currently Amended) A printing paste comprising homopolymer or copolymer as

claimed in claim 6, which has a gel body content of at most 0.5%, preferably 0.15%, based on

the total mass of the printing paste.

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15. (Cancelled).

16. (Currently Amended) A method of avoiding induction times during the inverse

 $emulsion\ polymerization\ of\ free-radically\ polymerizable\ water-soluble\ and/or\ water-dispersible$

monomers, optionally with further comonomers, during which no $\frac{transiation}{transition}$ metal

compounds are added, comprising the step of <u>using 2-hydorxy hydroxy-2-sulfinatoactic</u> sulfinatoacetic acid and/or salt theref thereof as a reducing agent component or a redox initiator

pair comprising an oxidizing agent and a reducing agent.

17. (Previously Presented) A method of thickening printing pastes comprising the

step of adding a water-in-oil emulsion as claimed in claim 8.

18. (Previously Presented) A method of thickening printing pastes comprising the

step of adding a homopolymer or a copolymer as claimed in claim 6.

19 (Cancelled)

20. (Previously Presented) A process as claimed in claim 2, comprising the following

steps:

a) dissolution of at least one water-in-oil emulsifier or at least one protective colloid

in a hydrophobic liquid inert for the polymerization as a result of which an oil phase is formed,

b) dissolution or dispersion of the monomers and optionally further comonomers, an

oil-in-water emulsifier and the at least one redox initiator in water, as result of which an aqueous phase is formed.

c) mixing of the oil phase and the aqueous phase until the aqueous phase is

emulsified in the oil phase,

d) homopolymerization or copolymerization of the monomers used and optionally

further comonomers.

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 (Previously Presented) A process as claimed in claim 3, comprising the following steps:

a) dissolution of at least one water-in-oil emulsifier or at least one protective colloid

in a hydrophobic liquid inert for the polymerization as a result of which an oil phase is formed,

b) dissolution or dispersion of the monomers and optionally further comonomers, an

oil-in-water emulsifier and the at least one redox initiator in water, as result of which an aqueous phase is formed.

 mixing of the oil phase and the aqueous phase until the aqueous phase is emulsified in the oil phase,

d) homopolymerization or copolymerization of the monomers used and optionally further componers

 (Previously Presented) A process as claimed in claim 2, wherein no transition metal compounds are added in the process.

 (Previously Presented) A process as claimed in claim 3, wherein no transition metal compounds are added in the process.

 (Previously Presented) A process as claimed in claim 4, wherein no transition metal compounds are added in the process.